



SUPERFUND RECORDS

Bob Holden, Governor • Stephen M. Mahfoud, Director



# DEPARTMENT OF NATURAL RESOURCES

DIVISION OF ENVIRONMENTAL QUALITY

P.O. Box 176 Jefferson City, MO 65102-0176

DEC 17 2001

Mr. Jeffrey Zelms, President  
The Doe Run Resources Corporation  
d/b/a The Doe Run Company  
1801 Park 270 Drive, Suite 300  
St. Louis, MO 63146

7ES

Site:	Herculaneum Lead
ID#	MOD006246373
Break:	1.0
Other:	12-17-01

A717

Dear Mr. Zelms:

The Department of Natural Resources made field observations on November 21 through December 6, 2001, related to Doe Run's Herculaneum facility. Field observations indicate Doe Run has failed to implement corrective actions in the Order to Abate and Cease and Desist Violations issued by the department on September 25, 2001, which Doe Run has appealed. This letter specifies those failures and also outlines continuing and/or new hazardous substance emergencies potentially actionable under the Missouri Hazardous Waste Management Law, Sections 260.500 through 260.575, RSMo. The items enumerated below are based on reported field observations and other information, and may not be an exhaustive list of deficiencies with respect to the requirements of the Order and the need to abate hazardous substance emergencies. Even though Doe Run has appealed the Order, we are notifying you of these issues in an effort to persuade Doe Run to implement timely and appropriate corrective actions according to the Order and applicable laws and regulations because of the serious public health concerns related to Doe Run's operations.

1. Doe Run has been using its new concentrate unloading station since on or about November 19, 2001. Department personnel have reported observing that some concentrate trucks are not washed after unloading, and some trucks receive limited washing of rear trailer components after unloading. The trucks that are washed have to pull forward several feet to allow access to the rear of the trailers for washing. The wash water, including any entrained concentrate, appears to fall onto the pavement in front of the wheel grizzly, making it available for tracking by trucks subsequently using the unloading station. The recent truck washing procedures are not as consistent or extensive as the washing procedures used prior to activation of the new concentrate unloading station. The wheel grizzly and pavement have been observed being washed sporadically between trucks, although it is not clear if there is a consistent procedure for this activity either. It is unclear to what extent washing of trucks and the unloading facilities have been added to the procedures for operation of the new concentrate unloading station, and how it is decided which trucks will be washed and which will not be washed.

The department has not approved the new concentrate unloading station, nor has the department approved any modification of truck washing procedures required under the Order. Doe Run has not demonstrated that the public roads in Herculaneum have been cleaned to acceptable levels. Doe Run has not demonstrated to the department's satisfaction that the new concentrate unloading station and new pavement on certain

roads will prevent releases of hazardous substances and the continued spread of contamination onto the public roads and other areas in Herculanum. Residual concentrate on the outside of trucks from loading and unloading operations and vehicles tracking contaminated materials from within the facility, including the new concentrate unloading station, onto public roads may continue to be sources of contamination in the community. Doe Run has not demonstrated that its cleaning procedures for the new concentrate unloading station effectively remove residual concentrate that adheres to trucks after unloading, and that accumulates in places in the unloading station where it may come in contact with truck tires. Field observations of operation of the new concentrate unloading station and cleaning procedures indicate that concentrate may remain available for release onto the public roads and other areas in Herculanum when the concentrate trucks leave the facility after unloading. Doe Run must continue washing concentrate trucks and all other vehicles leaving the facility in accordance with Section III. Corrective Actions Required, paragraph 1 of the Order unless or until the department approves an alternative truck cleaning plan or a plan for alternative modes of concentrate transportation to the facility.

Doe Run has implemented measures in an effort to reduce levels of contamination in the community caused by the Herculanum smelter and related operations, in spite of the company's apparent unwillingness to implement all corrective actions required in the Order. However, the extent of the effectiveness of Doe Run's measures has not been demonstrated and documented. The department would be willing to consider data and other information demonstrating that newly paved and other roads are clean, and that vehicles leaving the facility are no longer releasing hazardous substances in the community. We request Doe Run submit a plan to the department describing its measures in detail, sampling and analyses needed to determine the effectiveness of Doe Run's measures to date, and periodic sampling and analyses into the future to determine the long term effectiveness of Doe Run's measures.

2. Doe Run has not implemented all of the corrective actions required in the Order, which the department believes Doe Run must implement to remediate existing contamination from hazardous substance releases and prevent additional contamination.

Doe Run has not submitted to the department sample analytical data demonstrating that road dust concentrations on all hauling routes, the entire extent of contamination on streets that intersect hauling routes, and other areas inside or adjacent to the facility that are open to vehicular traffic are substantially equivalent to non-hauling route concentrations according to Section III. Corrective Actions Required, paragraph 2 of the Order.

Data generated by the department and the U. S. Environmental Protection Agency subsequent to issuance of the Order have indicated that road dust concentrations on contaminated roads in Herculanum remain elevated above the road dust concentrations of non-hauling routes. Therefore, according to Section III. Corrective Actions Required, paragraph 2 of the Order, Doe Run in consultation with the city of Herculanum must repave the hauling routes and the intersecting streets where contamination exists according to the schedule in the Order. The plan for repaving the hauling routes and the intersecting streets where contamination exists was due to be submitted by Doe Run to the department by November 5, 2001, and has not yet been received for our review and approval.

The department has not received documentation indicating that Doe Run has implemented all provisions of the Order pertaining to possible contamination in employee parking lots according to Section III. Corrective Actions Required, paragraphs 1 and 2 of the Order.

Section III. Corrective Actions Required, paragraph 3 of the Order required Doe Run to submit to the department by October 8, 2001, a detailed plan for concentrate delivery to the Herculanum smelter that does not involve the use of open dump trucks, either tarped or untarped. The department has not yet received this plan for our review and approval.

Section III. Corrective Actions Required, paragraph 3 of the Order requires that Doe Run shall cease transport of lead concentrate or other hazardous substances along the public streets of Herculanum using open dump trucks, either tarped or untarped, by November 12, 2001. Doe Run continues to use such trucks to transport these materials.

Section III. Corrective Actions Required, paragraph 8 of the Order, requires that Doe Run shall immediately cease transport of lead concentrate and other hazardous substances along the public streets of Herculanum if any of the corrective actions required under the Order are not taken within the timeframes prescribed in the Order. Doe Run has not implemented all corrective actions within the timeframes prescribed in the Order, and continues to transport lead concentrate and other hazardous substances along the public streets of Herculanum.

3. During the observation period covered by this letter, department personnel reported observing visible dust on the roads near the facility. Department personnel reported observing road dust becoming airborne in the wake of vehicle traffic on roads near the facility during dry conditions. Wetted road dust may also be transported by vehicle traffic during wet weather conditions.

During the observation period covered by this letter, department personnel observed vehicles departing from the south end of the facility after washing, passing over roads with visible dust, thereby tracking dust along the public streets of Herculanum and causing road dust to become airborne. We assume the roads in these areas are contaminated unless or until it is demonstrated otherwise.

Department personnel reported observing during the observation period covered by this letter vehicles departing from the east and south sides of the facility, which drove directly through town without washing. We assume the roads in these areas are contaminated unless or until it is demonstrated otherwise. Vehicles from the Herculanum wastewater treatment facility routinely do not stop to wash before proceeding onto the public streets of Herculanum.

Department personnel have reported observing vehicles working in the slag pile area and moving between the slag pile and other areas of the facility without washing.

During the period of observation covered by this letter, department personnel reported that concentrate truck beds were not washed after delivery of each load of concentrate, but rather only at the end of each shift. As of November 19, 2001, when Doe Run began using the new concentrate unloading station, it is unclear if the beds of concentrate trucks are being washed at any time. On December 6, 2001, department personnel observed several concentrate trucks enter, unload, and leave the facility between 17:00 and 18:00,

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after which the unloading station appeared to close for the day. It was not apparent that the beds of any of these trucks were washed prior to departing the facility.

Department personnel reported periodically observing visible dust emissions in the yard at the south end of the facility during the period of observation covered by this letter.

Recent field reports indicate street sweeper operation only on roads near the facility, and at times only sporadically. It is apparent from field observation reports that street cleaning is not taking place along the entire extent of the haul routes through Herculanum. It has been reported that the dry street sweeper creates visible airborne dust. The effectiveness of street sweeping is often questioned in field observation reports.

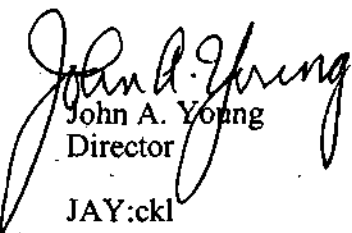
On December 6, 2001, department personnel reported observing residential soil cleanup activities at 429 Curved Street. Rainfall overnight on December 5 - 6, 2001, created muddy conditions on December 6, 2001. It was observed that vehicles leaving the cleanup site were tracking a significant amount of mud onto Curved, Cross, and Joachim Streets. This could ultimately be a source of contaminated road dust.

These observations indicate failures to implement Section III. Corrective Actions Required of the Order, and indicate a continuation of the hazardous substance emergency.

Please contact Mr. Dan Schuette at (573) 751-1387 if you have any questions about this letter.

Sincerely,

AIR AND LAND PROTECTION DIVISION



John A. Young  
Director

JAY:ckl



Bob Holden, Governor • Stephen M. Mahfood, Director

## DEPARTMENT OF NATURAL RESOURCES

DIVISION OF ENVIRONMENTAL QUALITY

P.O. Box 176 Jefferson City, MO 65102-0176

DEC 17 2001

Mr. Jeffrey Zelms, President  
The Doe Run Resources Corporation  
d/b/a The Doe Run Company  
1801 Park 270 Drive, Suite 300  
St. Louis, MO 63146

Dear Mr. Zelms:

The Department of Natural Resources made field observations on October 26 through November 20, 2001, related to Doe Run's Herculaneum facility. Field observations indicate Doe Run has failed to implement corrective actions in the Order to Abate and Cease and Desist Violations issued by the department on September 25, 2001, which Doe Run has appealed. This letter specifies those failures and also outlines continuing and/or new hazardous substance emergencies potentially actionable under the Missouri Hazardous Waste Management Law, Sections 260.500 through 260.575, RSMo. The items enumerated below are based on reported field observations and other information, and may not be an exhaustive list of deficiencies with respect to the requirements of the Order and the need to abate hazardous substance emergencies. Even though Doe Run has appealed the Order, we are notifying you of these issues in an effort to persuade Doe Run to implement timely and appropriate corrective actions according to the Order and applicable laws and regulations because of the serious public health concerns related to Doe Run's operations.

1. Doe Run reportedly began using its new concentrate unloading station on November 19, 2001. Concentrate trucks using the new concentrate unloading station are reportedly not being washed before leaving the facility after unloading. Doe Run has not demonstrated that the public roads in Herculaneum have been cleaned to acceptable levels. Doe Run has not demonstrated to the department's satisfaction that the new concentrate unloading station and new pavement on certain roads will prevent releases of hazardous substances and the continued spread of contamination onto the public roads and other areas in Herculaneum. Residual concentrate on the outside of trucks from loading and unloading operations and vehicles tracking contaminated materials from within the facility, including the new concentrate unloading station, onto public roads may continue to be sources of contamination in the community. Doe Run has not demonstrated that its cleaning procedures for the new concentrate unloading station adequately remove residual concentrate that adheres to trucks after unloading, and that accumulates in places in the unloading station where it may come in contact with truck tires. Field observations of operation of the new concentrate unloading station and cleaning procedures indicate that concentrate may remain available for release onto the public roads and other areas in Herculaneum when the concentrate trucks leave the facility after unloading. Doe Run must continue washing concentrate trucks and all other vehicles leaving the facility in accordance with Section III. Corrective Actions Required, paragraph 1 of the Order unless or until the department approves an alternative truck cleaning plan or a plan for alternative modes of concentrate transportation to the facility.

Doe Run has implemented measures in an effort to reduce levels of contamination in the community caused by the Herculaneum smelter and related operations, in spite of your apparent unwillingness to implement all corrective actions required in the Order. However, the extent of

the effectiveness of Doe Run's measures has not been demonstrated and documented. The department would be willing to consider data demonstrating that newly paved and other roads are clean, and that trucks leaving the facility are no longer releasing hazardous substances in the community. We suggest Doe Run submit a plan describing sampling and analyses needed to determine the effectiveness of Doe Run's measures, including but not limited to wipe samples from trucks and locations in the new concentrate unloading facility that may come in contact with concentrate truck tires; dust samples from new pavement and the haul routes; and periodic sampling and analyses into the future to determine the long term effectiveness of Doe Run's measures.

2. Doe Run has not implemented all of the corrective actions required in the Order, which the department believes Doe Run must implement to remediate existing contamination from hazardous substance releases and prevent additional contamination.

Doe Run has not submitted to the department sample analytical data demonstrating that road dust concentrations on all hauling routes, the entire extent of contamination on streets that intersect hauling routes, and other areas inside or adjacent to the facility that are open to vehicular traffic are substantially equivalent to non-hauling route concentrations according to Section III. Corrective Actions Required, paragraph 2 of the Order.

Data generated by the department and the U. S. Environmental Protection Agency subsequent to issuance of the Order have indicated that road dust concentrations on contaminated roads in Herculanum, while reduced, remain elevated above the road dust concentrations of non-hauling routes. Therefore, according to Section III. Corrective Actions Required, paragraph 2 of the Order, Doe Run in consultation with the city of Herculanum must repave the hauling routes and the intersecting streets where contamination exists. The plan for repaving the hauling routes and the intersecting streets where contamination exists was due to be submitted by Doe Run to the department by November 5, 2001, and has not yet been received for our review and approval.

The department has not received documentation indicating that Doe Run has implemented all provisions of the Order pertaining to possible contamination in employee parking lots according to Section III. Corrective Actions Required, paragraphs 1 and 2 of the Order.

Section III. Corrective Actions Required, paragraph 3 of the Order required Doe Run to submit to the department by October 8, 2001, a detailed plan for concentrate delivery to the Herculanum smelter that does not involve the use of open dump trucks, either tarped or untarped. The department has not yet received this plan for our review and approval.

Section III. Corrective Actions Required, paragraph 3 of the Order requires that Doe Run shall cease transport of lead concentrate or other hazardous substances along the public streets of Herculanum using open dump trucks, either tarped or untarped, by November 12, 2001. Doe Run continues to use such trucks to transport these materials.

Section III. Corrective Actions Required, paragraph 8 of the Order, requires that Doe Run shall immediately cease transport of lead concentrate and other hazardous substances along the public streets of Herculanum if any of the corrective actions required under the Order are not taken within the timeframes prescribed in the Order. Doe Run has not implemented all corrective actions within the timeframes prescribed in the Order, and continues to transport lead concentrate and other hazardous substances along the public streets of Herculanum.

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3. During the observation period covered by this letter, the following observations indicate failures to implement Section III. Corrective Actions Required of the Order, and indicate a continuation of the hazardous substance emergency. Department personnel reported observing visible dust on the roads near the facility. Small piles of dark material resembling concentrate were observed on the recently paved road near the railroad tracks at the south end of the facility on November 7, 2001, and on Station Street near the scale house on November 17, 2001. Department personnel reported observing road dust becoming airborne in the wake of vehicle traffic on roads near the facility.

Department personnel observed vehicles departing from the south end of the facility after washing, passing over roads with visible dust, thereby tracking dust along the public streets of Herculanum and causing road dust to become airborne. We assume the roads in these areas are contaminated unless or until it is demonstrated otherwise.

Vehicles departing from the east and south sides of the facility, which drove directly through town without washing. We assume the roads in these areas are contaminated unless or until it is demonstrated otherwise.

Concentrate truck beds were not washed after delivery of each load of concentrate, but rather only at the end of each shift. As of November 19, 2001, when Doe Run began using the new concentrate unloading station, it is unclear if the beds of concentrate trucks are being washed at any time.

Department personnel reported periodically observing visible dust emissions in the yard at the south end of the facility, in the slag pile area, residential yard cleanup sites, soil repository, and clean soil borrow area.

Recent field reports indicate street sweeper operation only on roads near the facility, and at times only sporadically. It is apparent from field observation reports that street cleaning is not taking place along the entire extent of the haul routes through Herculanum. It has been reported that the dry street sweeper creates visible airborne dust.

Department personnel reported that on November 17, 2001, street sweepers were observed operating only in the afternoon and only on roads near the facility, and the vehicle wash stations appeared to not be manned at any time during the period of observation.

Department personnel reported observing visible air emissions from the facility on November 20, 2001, from the tall building near the baghouse at 10:20, 11:20, and 14:20. A blue tinted emission from the north door area and west side roof edge with an opacity of 20% to 30% was observed.

Department personnel reported observing visible air emissions from the facility on November 17, 2001, apparently originating from near the northeast corner of the sinter plant. A dark gray to black emission was first observed at 11:50 from a vantage on Main Street south of Station Street. By the time the apparent source location was identified, the emission was yellowish in color. Department personnel observed the yellowish emission from a vantage on Curved Street just west of the intersection with Main Street looking south of east into the center of the facility. A small shed-like structure and ductwork at the northeast corner of the sinter plant were at times largely obscured by the emission. The emission was observed at various intensities from 11:50 to at least 12:30. The emission rose high above its source and did not readily dissipate. The wind was blowing from the south-southeast, and carried the emission across Main Street to the northwest.

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Department personnel reported observing visible air emissions from the facility beginning at about 17:39 on November 16, 2001. These emissions were observed for about ten minutes coming from the east side of the plant in the area north of the main stack and north of standing ductwork but south of the baghouse on the west side of the facility and the building behind the baghouse.

Department field personnel reported visible emissions from the main stack on November 14, 2001. Stack emissions of 20% opacity or greater were reported from 09:59 to 10:09, with opacity reported at greater than 80% from 09:59 to 10:05. Stack emissions of greater than 20% were also reported from 10:30 to 10:47 on November 14, 2001.

On November 9, 2001, department personnel reported observing a person riding a motorcycle on the slag pile southwest of the city's wastewater treatment facility. On November 17, 2001, department personnel reported observing an apparent open access route for off-road vehicles (ORV) from Dale Street north of the slag pile area, and ORV tracks on the western slopes of the slag pile.

On November 2 and 4, 2001, department personnel observed various vehicles leaving the slag pile area traveling on the recently paved road toward the east side of the facility.

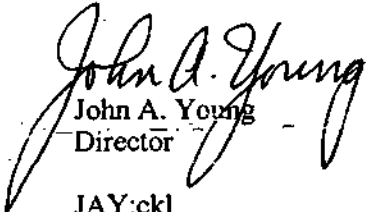
Department personnel reported observing an untarped coke truck on the morning of October 31, 2001.

Department personnel reported observing a Moxxy truck driving through the slag pile causing visible airborne dust on October 31, 2001.

Please contact Mr. Dan Schuette at (573) 751-1387 if you have any questions about this letter.

Sincerely,

AIR AND LAND PROTECTION DIVISION



John A. Young  
Director

JAY:ckl

c: Mr. Stephen Mahfood, Director, Missouri Department of Natural Resources  
Ms. Melissa Manda, General Counsel, Missouri Department of Natural Resources  
Mr. Anthony Frazier, Attorney General's Office  
Mr. Tony Petruska, Environmental Protection Agency